

LISTING OF CLAIMS

(1). (canceled)

(2). (canceled)

(3). (currently amended) A liquid crystal display comprising:

first and second substrates each having a display and a non-display region and being disposed to face each other;

a plurality of columns each comprising a spacer ~~spacers~~ disposed in the non-display region of at least one of the first and the second substrates and being formed of photosensitive resin which regulates a cell gap between the first and the second substrates; and

liquid crystal sandwiched between the first and the second substrates,

wherein each of said spacers has a ~~have~~ dynamic hardness value (DH) from 26 to 30, which is obtained by the following formula:

$$DH = K \times P_{\max} / h_{\max}^2,$$

wherein DH is dynamic hardness, K is a constant value assigned to the indentator used to test the liquid crystal display, P_{\max} is maximum load, and h_{\max} is the total maximum

variation obtained by adding the measured elastic deformation and plastic deformation under load,

and wherein each of said spacers has ~~have~~ a hardness value of plastic deformation (HV) from 38 to 46, which is obtained by the following formula:

$$HV = K \times P_{\max} / h_r^2,$$

wherein HV is hardness of plastic deformation, K is a constant value assigned to the indentator used to test the liquid crystal display, Pmax is maximum load, and hr is measured variation when the tangent in the maximum variation point of a curb has no load in the case of unloading.

(4) - (8) (canceled)

(9) (currently amended) The liquid crystal display according to claim 3 wherein said plurality of columns ~~spacers~~ have column occupancy ratio from 0.05 to 0.86%, which is expressed as follows:

Column occupancy ratio = (Lower bottom area of column x column

Density/pixel) x 100

Column density: Total number of columns/total number of pixels.

(10) - (14) (canceled)

(15) (currently amended) The liquid crystals according to claim 3 wherein for a rectangular ~~spacer~~ ~~spacers~~, the length of one side of the upper spacer surface is 50 to 90% smaller than the length of one side of the lower spacer surface and wherein for a circular ~~spacer~~ ~~spacers~~, the diameter of the upper spacer surface is 50 to 90% smaller than the diameter of the lower spacer surface.

(16) - (28) (canceled)

(29) (currently amended) A ~~The~~ method for providing a liquid crystal display comprising the steps of:

disposing a first and second substrate facing each other, said first and second substrates having a display and a non-display region;

selecting a photosensitive resin to regulate a cell gap between the first and the second substrate; ~~according to claim 28~~ wherein said selecting of a photosensitive resin comprises choosing a photosensitive resin based on at least one of the group consisting of:

(a) a dynamic hardness value from 26 to 30, which is obtained by the following formula:

$$DH = K \times P_{\max} / h_{\max}^2,$$

wherein DH is dynamic hardness, K is a constant value assigned to the indentator used to test the liquid crystal

display, P_{max} is maximum load, and h_{max} is the total maximum variation obtained by adding the measured elastic deformation and plastic deformation under load;

(b) a hardness value of plastic deformation (HV) from 38 to 46, which is obtained by the following formula:

$$HV = K \times P_{max} / h_r^2,$$

wherein HV is hardness of plastic deformation, K is a constant value assigned to the indentator used to test the liquid crystal display, P_{max} is maximum load, and h_r is measured variation when the tangent in the maximum variation point of a curb has no load in the case of unloading;

(c) an elastic coefficient from 100 to 500 kg/mm^2 ; a linear expansion coefficient which is nearly equal to the coefficient of volume expansion per unit area of the liquid crystal;

(d) wherein for rectangular spacers, the length of one side of the upper spacer surface is 50 to 90% smaller than the length of one side of the lower spacer surface and wherein for circular spacers, the diameter of the upper spacer surface is 50 to 90% smaller than the diameter of the lower spacer surface; and

(e) a column occupancy ratio from 0.05 to 0.86%, which is expressed as follows:

$$\text{Column occupancy ratio} = (\text{Lower bottom area of column} \times \text{column density} / \text{pixel area}) \times 100$$

Column density: Total number of columns/total number of
pixels;

placing spacers comprising said photosensitive resin between
the first and the second substrates, said spacers being placed in
the non-display region of at least one of the first and the
second substrates; and

providing liquid crystal between the first and the second
substrates.